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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,783	12/14/2005	Masahiro Ebiko	OGW-0408	7413

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EXAMINER	
MAKI, STEVEN D	

ART UNIT	PAPER NUMBER
1791	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,783	EBIKO, MASAHIRO	
	Examiner	Art Unit	
	Steven D. Maki	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 5-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 5-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2) **Claims 1. 2 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daisho et al (US D507233) in view of Japan 006 (JP 01-178006), Graas (US 4,574,856), Landers et al (US 6,450,223) and Ochi et al (US 6,571,844)**

With respect to Daisho et al (filed 12-18-03), applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Daisho et al discloses an automobile tire having a tire tread comprising first main see through grooves extending linearly in a circumferential direction of the tire, second main see through grooves extending zigzag in a circumferential direction of the tire, a narrow circumferential groove extending in the circumferential direction of the tire between each first main see-through groove and each second main see through groove, first lug grooves and second lug grooves. See title, description and figures 1-7, especially figure 5. The first lug groove comprises an inner groove part and an outer groove part wherein the inner groove part comprises a one side end groove portion, the other side end groove portion and an intermediate groove portion. Figure 5 clearly illustrates the intermediate groove portion having a smaller inclination to the tire circumferential direction than the one side end groove portion and the other side end groove portion. Figure 5 also clearly illustrates the narrow circumferential groove

having a smaller width than the first and second main see-through grooves. The lug grooves obliquely extend in a reverse rotational direction of the tire. Transverse grooves are disposed between the first main see through grooves. The transverse grooves have vertexes that face to the reverse rotational direction of the tire. Blocks are defined by the grooves of the tire tread. The design of Daisho et al's tire tread shown in figure 5 is substantially similar to the design of applicant's tread shown in Figure 1. Daisho et al does not specifically recite disposing the first main see through grooves in a region of from 4% to 15% of a ground contact width of the tire from an equatorial plane of the tire toward each of left and right sides.

Japan 006 discloses a pneumatic tire having a tread comprising five rows of blocks, four "see-though" circumferential main grooves (1b, 1a, 1a, 1b) and transverse sub-grooves (2a, 2b, 2c). The ground contact area 10 has a width W. The transverse sub-grooves 2b and 2c extend from the inner circumferential grooves (1a, 1a) toward the outer sides of the tire in a "reverse rotational direction of the tire" so as to communicate with the ground contact ends (11, 12). The transverse sub-grooves 2a between the center blocks are V-shaped and have their vertexes facing to the "reverse rotational direction of the tire". The two groove portions of the V-shaped transverse sub-groove are each inclined at an angle theta C of 20-40 degrees with respect to the axial direction (figure 1, page 4 lower left), which is the same as 50-70 degrees with respect to the circumferential direction. The width Wc of the center blocks is 15-35% of the ground contact width W (figure 1, page 4 lower right). This means that the inner edge of each inner circumferential groove (1a, 1a) is spaced from the equatorial plane

of the tire by 7.5% to 17.5% W. The width Wm is 50-70% of the ground contact width W (figure 1, page 5 upper left). This means that the inner edge of each outer circumferential groove (1b, 1b) is spaced from the equatorial plane by 25% to 35% W. The tire has enhanced brake performance on wet road and reduced pattern noise. See abstract and figure 1.

As to claim 1, it would have been obvious to one of ordinary skill in the art to provide Daisho et al's automobile tire as a pneumatic tire, dispose the first main see through grooves of Daisho et al's tire tread in a region of from 4% to 15% of a ground contact width of the tire from an equatorial plane of the tire toward each of left and right sides, and dispose the second see through main grooves of Daisho et al's tire tread in a region of from 35% to 45% of the ground contact width of the tire from the equatorial plane of the tire toward each of the left and right sides since Japan 006, directed to a directional tread pattern similar to that of Daisho et al, suggests incorporating such a tread pattern into a pneumatic tire, spacing the inner edge of first main see through grooves from the equatorial plane of the tire by 7.5 to 17.5% of the ground contact width W and spacing the inner edge of each outer circumferential groove (1b, 1b) from the equatorial plane by 25% to 35% W. The range of 7.5-17.5% overlaps the claimed range of 4-15%. The range of 25-35% overlaps the claimed range of 35-45%.

With respect to the ratio ACA/GCA, it would have been obvious to one of ordinary skill in the art to provide the directional tread of Daisho et al's tire with a net to gross (ratio ACA/GCA of a total ground contact area ACA of the blocks to a ground contact area GCA of the entire tread surface) of 55% to 75% since (1) Graas suggests

providing the tread of a pneumatic tire, which may be directional (figure 4), such that the net to gross is 60% to 80% to obtain efficient evacuation of water, mud or snow from the footprint of the tire and (2) Landers et al suggests providing a directional tread of a pneumatic tire having four circumferential grooves (12, 17, 17, 12) with a net to gross of 60% to 68% to obtain suitable wet traction / stopping.

Furthermore, it would have been obvious to one of ordinary skill in the art to provide the transverse grooves having vertexes that face the reverse rotational direction between the center blocks of Daisho et al's tread as "V shaped transverse grooves" such that the groove width W of the V-shaped transverse groove is 10-25% of the circumferential length of the center block in view of (1) Japan 006's teaching to form grooves in the tread to enhance brake performance on wet road and to configure transverse grooves having vertexes that face the reverse rotation direction between the center blocks as "V-shaped grooves", (2) the relative groove width of the V-shaped transverse grooves and length of center blocks shown in figure 1 of Japan 006 and (3) the suggestion from Graas and Landers et al to size the grooves of the tire tread to obtain a net to gross of 60-80% and 60-68% respectively to improve wet traction / stopping. In other words, the optimum groove width of center grooves relative to the length of the center blocks of Daisho et al's tire tread would have been obvious and could have been determined without undue experimentation in view of the above noted teachings of the applied prior art.

With respect to the narrow circumferential grooves, it would have been obvious to provide the narrow circumferential grooves of Daisho et al's tire tread with a smaller

width than the first and second main see through grooves since (1) Figure 5 of Daisho et al clearly illustrates the narrow circumferential groove having a smaller width than the first and second main see-through grooves and (2) Ochi et al teaches providing a tire tread, which like that of Daisho et al has four main circumferential grooves (14, 16), with a pair of narrow circumferential grooves 15 to obtain good straight line stability and cornering when driving on snow wherein the width of the narrow circumferential grooves 15 is 2 mm whereas the width of main grooves 14 is 8 mm and the width of main grooves 16 is 6 mm (col. 12 lines 65-68, col. 13 lines 1-17). It is noted that the net to gross of Ochi et al's tread is 65% (negative ratio = 35%). It is also noted that Graas teaches that an all-season tire (net to gross 60-80%) should have good wet and snow traction.

As to claim 2, Japan 006 suggests forming the two groove portions of the V-shaped transverse sub-groove such that each groove portion is inclined at an angle theta C of 20-40 degrees with respect to the axial direction (figure 1, page 4 lower left). This means that Japan 006 suggests forming the two groove portions of the V-shaped transverse groove such that each groove portion is inclined at 50-70 degrees with respect to the circumferential direction.

As to claim 5, the "first lug grooves" of Daisho et al are offset from the shoulder lug grooves in the circumferential direction. See Figure 5 of Daisho et al.

As to claim 6, the outer circumferential grooves are in symmetrical positions with respect to the equatorial plane of the tire. See figure 5 and figure 6 of Daisho et al.

As to claim 7, the vertexes of the transverse grooves of Daisho et al and Japan 006 are located on the equatorial plane of the tire. See figure 5 of Daisho et al and figure 1 of Japan 006.

As to claim 8, the inner circumferential grooves are located in symmetrical positions with respect to the equatorial plane. See figure 5 and figure 6 of Daisho et al.

As to claim 9, it would have been obvious to provide Daisho et al's blocks with sipes since Daisho et al illustrates the blocks as having zigzag lines, which one of ordinary skill in the art would readily understand from at least Ochi et al are or should be sipes for improving edge effect.

As to claim 10, Daisho et al shows the outer groove part having the same inclination to the tire circumferential direction as the one side end groove portion and the other side end groove portion of the inner groove part. See figure 5 of Daisho et al.

Remarks

3) Applicant's arguments with respect to claims 1, 2 and 5-10 have been considered but are moot in view of the new ground(s) of rejection.

4) No claim is allowed.

5) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
October 14, 2008